

REMARKS

[0001] Claims 1-20 are pending in this application. Claims 1-4, 8-12, and 16-20 stand rejected, while Claims 5-7 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 1, 9, and 17 stand rejected under 35 U.S.C. §112 second paragraph in relation to definiteness. Claims 1-20 stand rejected under U.S.C. §101. Claims 1, 8, 9, 16 and 17 are further rejected under 35 U.S.C. § 102(a) as being anticipated by Applicant's Admitted Prior Art (hereinafter "APA"). Claims 2, 3, 10, 11, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of U.S. Patent No. 6,871,204 to Muralidhar Krishnaprasad et al. (hereinafter "Krishnaprasad"). Claims 4, 12, and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of U.S. Patent Pub. No. 2003/0226109 to Dan Adamson (hereinafter "Adamson"). Applicants have amended independent Claims 1, 9-12, 14-16, and 17 and canceled Claims 5 and 13.

AMENDMENTS TO CLAIMS

[0002] Claim 1 as amended specifies that the association modules relates the database schema and the document schema. Applicants' Specification ¶¶ 14, 62. Claim 1 is further amended to incorporate the limitations of canceled Claim 5. Claim 9 is similarly amended such that it specifies relating the database schema and document schema. Claim 9 also incorporates the limitations of canceled Claim 13. Claim 17 is amended to incorporate substantially the same limitations and amendments applied to Claims 1 and 9. Support for these amendments is found in at least the same sections of

the specification and claims cited above. Applicants' Specification ¶¶ 14, 62. Claims 1 and 9-16 are amended to clarify the statutory subject matter of the present invention.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 112

[0003] The Office Action has rejected Claims 1, 9, and 17 for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to Claims 1 and 9, the Office Action asserts that the terms “associate” and “associating” are unclear as the terms can mean grouping or comparing. Applicants respectfully disagree, and note that the specification makes clear the meaning of “associate” and “associating” as used in Claims 1 and 9. However, in order to facilitate prosecution, Applicants have amended Claims 1 and 9 such that the terms “relate” and “relating” are used in place of the aforementioned terms. Applicants submit that while the amendments do not change the scope of the Claims, the amendments particularly points out and distinctly claims the subject matter.

[0004] With respect to Claim 17, the Office Action objects to the use of the term “coupling.” Applicants again disagree, but, as above, have amended the Claim to facilitate expedite prosecution. As such, Applicants respectfully submit that Claims 1, 9, and 17 particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 101

[0005] The Office Action asserts that Claims 1-20 are directed towards non-statutory subject matter, and thus subject to rejection under §101. The Office Action

asserts that the Claims (1, 9, and 17) lack the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. § 101. However, Claim 1 is directed to an *apparatus* and Claim 17 is directed to an article of manufacture. Applicants assert that an *apparatus* and an *article of manufacture* by definition fit at least in the categories of a machine or manufacture.

[0006] To expedite prosecution, Claim 1 is amended to recite an “apparatus having a logic unit for...” The specification clearly explains that logic components including logic units may take various forms in different embodiments all within the scope of the apparatus recited in amended Claim 1. See Specification paragraphs 33-35.

[0007] Claim 17 recites “An article of manufacture comprising a **program storage medium** readable by a **processor**.” The MPEP recognizes that when “functional descriptive material is recorded on some computer-readable medium, it becomes *structurally and functionally interrelated* to the medium and will be *statutory* in most cases since use of technology permits the function of the descriptive material to be realized.” MPEP 2106.01(I) (emphasis added). Additionally, the MPEP states “a claimed computer-readable medium encoded with a computer program is a computer element which defines *structural and functional interrelationships* between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus *statutory*.” MPEP 2106.01(I) (emphasis added). Furthermore, the MPEP states “When a computer program is recited *in conjunction with a physical structure*, such as a computer memory, USPTO personnel should treat the claim as a product claim.” MPEP 2106.01(I) (emphasis added). Here, a “program storage medium”

and “processor” are recited. Consequently, Claim 17 is properly directed toward statutory subject matter.

[0008] The Office Action does state that the claimed computer-related process must result in a physical transformation outside the computer or be limited to a practical application with a useful, tangible result and is at best functional descriptive material per se. Applicants respectfully assert that Claim 9, as amended, is clearly directed to statutory subject matter and produces a useful, concrete and tangible result. Specifically, Claim 9 is amended to recite “A computer-programmed method...” Similarly, Claims 10-16 are amended to recite a similar preamble. While Applicants do not agree with the rejection of the Office Action, Applicants submit that these amendments clearly indicate that these computer-programmed methods produce a concrete, useful, and tangible result and qualify as statutory subject matter and not functional descriptive material per se.

[0009] As amended, the method comprises relating the database schema and the document schema to provide a metadata schema that enables data to be passed between an XML document and the hierarchical database. The metadata schema is a useful, concrete and tangible result. The metadata schema is an actual physical entity even though it may exist as a data structure in a computer memory. The metadata schema may be stored in a file, printed, etc. The metadata schema facilitates passing data between an XML document and a hierarchical database. The data passed may be saved in an XML document, or may be saved from an XML document into a hierarchical database. This storage and transfer of data cannot be accomplished without the metadata schema. As such, the metadata schema, which constitutes the catalyst for the movement of the data, is itself a concrete and useful result.

[0010] Based on the above, Applicants respectfully assert that Claims 1, 9, and 17, as amended, along with their respective dependents, are directed towards statutory subject matter and are in condition for allowance.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. §102(b)

[0011] Claims 1, 8, 9, 16, and 17 stand rejected by the Office Action as being anticipated by Applicant's APA, comprising paragraphs 002-012 of the specification. Applicants respectfully disagree. It is well settled that under 35 U.S.C. §102 "an invention is anticipated if... all the claim limitations [are] shown in a single prior art reference. Every element of the claimed invention **must be literally present**, arranged as in the claim. The identical invention must be shown in as complete detail as is contained in the patent claim." *Richardson v. Suzuki Motor Co., Ltd.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Appellants respectfully assert that every element of the amended Independent Claims is not present in APA.

[0012] Claim 1 has been amended to specify that the database schema comprises a database field type identifier and the document schema comprises an XML element data type identifier that maps to the database field type identifier to facilitate converting content data between the XML element data type and the database field type based on the database field type identifier and the XML element data type identifier. The above language represents the limitation of the original Claim 5, now canceled. As noted by the Office Action, original Claim 5 represented allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully assert that Claim 1, as

amended, meets the criteria listed in the Office Action and that, as a result, Claim 1 is in condition for prompt allowance.

[0013] While Applicants have amended Claim 1 to facilitate expeditious prosecution, Applicants do not agree with the Office Action's assertion that APA anticipates even the original Claim 1. Claim 1 recites "a database accessor configured to access a database schema indicative of database field names and a **hierarchical structure for a hierarchical database.**" Claim 1 also recites "...XML documents that can be passed into and out of the **hierarchical database...**" and "...provid[ing] a metadata schema that enables data to be passed between an XML document and the **hierarchical database...**" Applicants note that APA does not recite or deal with hierarchical databases, and as such, does not teach the limitations outlined above.

[0014] The APA notes that "[g]enerally, two types of databases may store the data in the XML document, hierarchical or relational." ¶ 5. The APA further observes that, while there are tools for passing XML data between XML documents and *relational* databases exist (¶ 8), "...no tools exist for passing XML documents and/or XML data between an XML document and a hierarchical DB, one example of which is IMS." ¶ 10. To the extent that the APA discusses solutions for sharing data between XML documents and databases, the discussion is expressly limited in each instance to a *relational* database.

[0015] As discussed in the specification, and known to those of skill in the art, relational databases and hierarchical databases are fundamentally different creatures. The organization, behavior, and logic of the two different organizational database models represent different approaches to storing and manipulating data. *See, e.g.*, Figure 1 and

the accompanying discussion. Claim 1 explicitly relates to hierarchical databases. While the APA discusses hierarchical databases, Claim 1 does not discuss a “database accessor configured to access a database schema indicative of database field names and a hierarchical structure for a hierarchical database,” nor does Claim 1 discuss “a metadata schema that enables data to be passed between an XML document and the hierarchical database....” As such, the APA does not teach all of the limitations of Claim 1.

[0016] Independent Claims 9 and 17 include subject matter and limitations similar to those of amended Claim 1. Applicants respectfully assert that Claims 9 and 17 are also in condition for prompt allowance over APA for at least the same reasons given above with respect to Claim 1.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. §103(a)

[0017] Claims 2, 3, 10, 11, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Krishnaprasad. Claims 4, 12, and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Adamson. Applicants respectfully assert that the Claims as amended overcome the § 103(a) rejection. In order to establish a *prima facie* case of obviousness, the prior art references combined must teach or suggest all of the claim limitations. MPEP § 2143. As discussed above, APA does not teach the limitation of a hierarchical database as used in the claims. Nor do either of the references teach the limitations of Claim 5 and its equivalents, which are incorporated into the independent Claims. Because neither reference teaches all of the claim limitations, Claims 1, 9, and 17 and their dependents are not obvious in light of the cited references.

CONCLUSION

[0018] As a result of the presented amendments and remarks, Applicants assert that Claims 1-20 are patentable and in condition for prompt allowance. Should the Examiner require additional information, Applicants respectfully request that the Examiner notify them of any such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contract the undersigned.

Respectfully submitted,

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